Job Reference

258_22_ES_CES_RE1

Position

HPC Workflows Engineer (RE1)

Data de tancament

Dilluns, 31 Octubre, 2022
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Job title: HPC Workflows Engineer (RE1)

About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 770 staff from 55 countries.

Look at the BSC experience:
BSC-CNS YouTube Channel
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Context And Mission

Within the Computational Earth Sciences group, the selected candidate will be part of the Models and Workflows team to develop software to run modeling experiments in Pre-Exascale High-Performance Computing facilities.

The Models and Workflows team (MWT) studies and develops essential frameworks and tools to efficiently run modeling experiments on HPC facilities. It is a growing team of a dozen members with intense collaboration with the Performance and Data teams and scientific groups.

The candidate will be part of an international workgroup developing modeling workflows for state-of-the-art
Digital Twins. These workflows will preferably run with the Autosubmit workflow orchestrator, developed by the same team, and scale within top-notch EuroHPC Pre-Exascale systems.

https://www.bsc.es/research-development/research-areas/computational-earth-science/earth-sciences-models-workflows

**Key Duties**

- Develop workflow scripts and libraries to execute Earth models on state-of-the-art HPCs.
- Contribute to the development and execution of automated tests.
- Work within an Agile framework, attend project meetings and contribute to writing project reports.
- Contribute to the porting and testing of state-of-the-art Digital Twins to Pre-Exascale systems.

**Requirements**

- **Education**
  - Having a Bachelor in Computer Science, Telecommunications, Physics or related discipline.
  - Having a Master’s degree will be valued.

- **Essential Knowledge and Professional Experience**
  - Good development skills and experience with UNIX/LINUX environments.
  - Experience in Python programming and/or scripting languages (Bash).
  - Experience in version control in a collaborative environment, including SVN or Git.

- **Additional Knowledge and Professional Experience**
  - Understanding of HPC computer architecture issues, including CPU, accelerators, memory, interconnect, parallel I/O, and computational performance in general.
  - Experience with coding and documentation best practices and standards.
  - Troubleshooting and debugging skills.
  - Previous experience in a scientific area related to the research position will be appreciated.
  - The BSC Earth Sciences department is an international and interdisciplinary environment, so the candidate must be fluent in English and have good written and verbal skills.

- **Competences**
  - Earth system models are sophisticated tools and High-Performance Computers are complex systems. The candidate needs to have excellent problem-solving skills and a proactive attitude to address new challenges and perfect the current solutions so they gain reliability and efficiency.
  - This is a specialized position so the successful candidate is expected to have a demonstrated learning capacity and the motivation to maintain a learning progression during the contract.
  - The candidate will work for an international collaborative project, so it is mandatory to be able to fulfill schedules and coordinate with members from other institutions, as well as disseminate the advances in international workshops.
Conditions

- The position will be located at BSC within the Earth Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Open-ended contract due to technical and scientific activities linked to the project and budget duration
- Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
- Starting date: ASAP

Applications procedure and process

All applications must be made through BSC website and contain:

- A full CV in English including contact details
- A Cover Letter with a statement of interest in English, including two contacts for further references - Applications without this document will not be considered

In accordance with the OTM-R principles, a gender-balanced recruitment panel is formed for every vacancy at the beginning of the process. After reviewing the content of the applications, the panel will start the interviews, with at least one technical and one administrative interview. A profile questionnaire as well as a technical exercise may be required during the process.

The panel will make a final decision and all candidates who had contacts with them will receive a feedback with details on the acceptance or rejection of their profile.

At BSC we are seeking continuous improvement in our recruitment processes, for any suggestions or feedback/complaints about our Recruitment Processes, please contact recruitment [at] bsc [dot] es.

For more information follow this link

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.
OTM-R principles for selection processes

BSC-CNS is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit-based Recruitment principles (OTM-R). This is applied for any potential candidate in all our processes, for example by creating gender-balanced recruitment panels and recognizing career breaks etc.
BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.
For more information follow this link

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